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Ruth Saskowski

### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the application of:

Ton LOGTENBERG, et al.

Serial No.:

09/418,563

Filing Date:

15 October 1999

For: ALTERING THE PROPERTIES OF CELLS OF PARTICLES WITH MEMBRANES DERIVED FROM CELLS BY MEANS OF LIPID-MODIFIED PROTEINACEOUS

MOLECULES

Examiner: R. Schwartzman

Group Art Unit: 1636

### PRELIMINARY AMENDMENT

Assistant Commissioner for Patents Washington, D.C. 20231

Dear Sir:

Prior to examination of the application herein, please amend the specification as follows.

Enclosed is the following Exhibit A: Marked-up Version of Amendments to the Claims.

#### **AMENDMENT**

# In the Specification:

On page 1 of the specification under the title, please insert

--This application is a continuation of U.S. Serial No. 09/418,563 filed 15 October 1999 and now allowed. The contents of this application are incorporated herein by reference.--

# In the Claims:

### Please replace the currently pending claims with the following:

- 1. A process for providing a cell and/or a particle comprising a membrane derived from said cell with an additional proteinaceous molecule, said process comprising contacting said cell and/or said particle with a lipid-modified proteinaceous molecule, wherein said lipid-modified proteinaceous molecule comprises at least one protein moiety derived from a first protein and at least one lipidation signal derived from a second protein.
  - 2. A process according to claim 1 wherein said cell is a eukaryotic cell.
  - 3. A process according to claim 1 wherein said particle is virus.
- 4. (Amended) A process according to claim 1 wherein at least part of the assembly of said lipid-modified proteinaceous molecule is performed in a cell.
- 5. A process according to claim 4 wherein said lipidation signal is derived from a lipoprotein.
- 6. A process according to claim 5 wherein said lipidation signal is derived from bacterial lipoprotein (lpp)
- 7. A process according to claim 5 wherein said lipidation signal is derived from glycosylphosphatidylinositol (GPI)-linked proteins.

- 8. (Amended) A process according to claim 1 wherein at least part of said proteinaceous molecule is derived from a protein of the immune system.
- 9. (Amended) A process according to claim 1 wherein at least part of said proteinaceous molecule is derived from a single chain variable fragment.
- 10. (Amended) A process according to claim 9 wherein said proteinaceous molecule comprises a first lipidation signal at the amino-terminus and a second lipidation signal at the carboxy-terminus.
- 11. (Amended) A process according to claim 1 wherein at least part of said proteinaceous molecule is derived from an antigen binding Fab fragment.
- 12. (Amended) A process according to claim 1 wherein at least part of the proteinaceous molecule comprises at least a part of a receptor, co-receptor, ligand, homing molecule, adhesion molecule, heat shock protein, signaling protein or pump.
- 13. (Amended) A process according to claim 1 wherein at least part of the proteinaceous molecule comprises a stretch of amino acids conferring to the proteinaceous molecule the property to interact with a signal-transducing molecule present on the plasma membrane of said cell.
- 14. (Amended) A process according to claim 1 wherein said proteinaceous molecule comprises a purification tag for the purification of said molecule.
- 15. (Amended) A process according to claim 1 wherein said proteinaceous molecule comprises a detection tag for the detection of said molecule.
- 16. (Amended) A process according to claim 1 wherein a lipid-modified proteinaceous molecule is added to the outer membrane of a eukaryotic cell or of a particle comprising a membrane derived from a eukaryotic cell.

- 17. (Amended) A vector for producing lipid-modified proteinaceous molecules said vector comprising at least one open reading frame encoding at least one proteinaceous molecule wherein said proteinaceous molecule comprises at least one protein moiety derived from a first protein and at least one lipidation signal derived from a second protein.
- 18. A vector according to claim 17 wherein said proteinaceous molecule further comprises a detection tag and/or a purification tag.
- 19. (Amended) A lipid-modified proteinaceous molecule used in a process according to claim 1.
- 20. A lipid-modified proteinaceous molecule produced with a vector according to claim 17 or claim 18.
- 21. (Amended) A lipid--modified proteinaceous molecule according to claim 19 comprising a flexible linker.
- 22. (Amended) A cell or a particle comprising a membrane derived from said cell, comprising a lipid-modified proteinaceous molecule, said cell or said particle obtainable by a process according to claim 1.
- 23. A cell or a particle comprising a membrane derived from said cell comprising at least one additional lipid-modified proteinaceous molecule wherein said lipid-modified proteinaceous molecule comprises at least one protein moiety derived from a first protein and at least one lipidation signal derived from a second protein.

Please cancel claims 24-26.

#### REMARKS

The claims have been amended to remove multiple dependencies and for clarification only. No new matter has been added entry of the amendment is respectively requested.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and authorize the Assistant Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket No. <u>313632000800</u>.

Respectfully submitted,

Dated:

December 31, 2001

By

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# EXHIBIT A. - VERSION WITH MARKINGS TO SHOW CHANGES MADE

## Please amend the claims as follows:

- 4. (Amended) A process according to [anyone of the claims 1-3] <u>claim 1</u> wherein at least part of the assembly of [the amino acid sequence and/or part of the lipidation of] said lipid-modified proteinaceous molecule is performed in a cell.
- 8. (Amended) A process according to [anyone of the claims 1-7] <u>claim 1</u> wherein at least part of said proteinaceous molecule is derived from a protein of the immune system.
- 9. (Amended) A process according to [anyone of the claims 1-8] <u>claim 1</u> wherein at least part of said proteinaceous molecule is derived from a single chain variable fragment.
- 10. (Amended) A process according to claim 9 wherein said proteinaceous molecule comprises a <u>first</u> lipidation signal at the amino.-terminus and a <u>second</u> lipidation signal at the carboxy-terminus.
- 11. (Amended) A process according to [anyone of claims 1-8] <u>claim 1</u> wherein at least part of said proteinaceous molecule is derived from [a fragment] <u>an</u> antigen binding [(FAB)] <u>Fab</u> fragment.
- 12. (Amended) A process according to [anyone of the claims 1-11] <u>claim 1</u> wherein at least part of the proteinaceous molecule comprises at least a part of a receptor, co-receptor, ligand, homing molecule, adhesion molecule, heat shock protein, signaling protein or pump.
- 13. (Amended) A process according to [anyone of the claims 1-12] <u>claim 1</u> wherein at least part of the proteinaceous molecule comprises a stretch of amino acids conferring to the proteinaceous molecule the property to interact with a signal-transducing molecule present on the plasma membrane of said cell.

- 14. (Amended) A process according to [anyone of the claims 1-13] <u>claim 1</u> wherein said proteinaceous molecule comprises a purification tag for the purification of said molecule.
- 15. (Amended) A process according to [anyone of the claims 1-14] <u>claim 1</u> wherein said proteinaceous molecule comprises a detection tag for the detection of said molecule.
- 16. (Amended) A process according to [anyone of the claim 1-15] <u>claim 1</u> wherein a lipid-modified proteinaceous molecule is added to the outer membrane of a eukaryotic cell or of a particle comprising a membrane derived from a eukaryotic cell.
- 17. (Amended) A vector for producing lipid-modified proteinaceous molecules [used in a process according to anyone of the claims 1-16,] said vector comprising at least one open reading frame [coding for] encoding at least one proteinaceous molecule wherein said proteinaceous molecule comprises at least one protein moiety derived from a first protein and at least one lipidation signal derived from a second protein.
- 19. (Amended) A lipid-modified proteinaceous molecule used in a process according to [anyone of the claims 1-16] <u>claim 1</u>.
- 21. (Amended) A lipid--modified proteinaceous molecule according to claim 19 [or claim 20] comprising a flexible linker.
- 22. (Amended) A cell or a particle comprising a membrane derived from said cell, comprising a lipid-modified proteinaceous molecule, said cell or said particle obtainable by a process according to [anyone of the claims 1-16] <u>claim 1</u>.